

Sigl et al.

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REMARKS

Claims 1-24 are pending in the present application. In the Office Action mailed July 21, 2004, the Examiner rejected claims 1, 3-9, 11-15, 17-21, and 23-24 under 35 U.S.C. §102(b) as being anticipated by Earl et al. (USP 5,304,735). The Examiner next rejected claims 2, 10, 16, and 22 under 35 U.S.C. §103(a) as being unpatentable over Earl et al. Claims 1-24 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 and 14-17 of Sigl et al. (USP 6,633,485).

The Examiner rejected claims 1, 3-9, 11-15, 17-21, and 23-24 under 35 U.S.C. §102(b) as being anticipated by Earl et al. Applicant has amended claim 1. As amended, claim 1 calls for an extruded heat sink having two laterally-facing exterior surfaces wherein each lateral surface has elongated ridges formed thereabout extending the full length of the lateral exterior surface and constructed to removably engage a retention means for securing the heat sink to a frame. Earl et al. states, with reference to Fig. 1, that "groove 14 has a pair of indentations 48, 50 disposed on opposite sides of each clip 40," and that "the opposite groove 16 has an identical pair of indentations (not shown)." Col. 4, lns. 8-11. Earl et al. further states that "essentially, as shown in Fig. 3a, the indentation 48 projects into the groove 14 a sufficient distance to prevent the rounded top 42 of the clip 40 from sliding past the indentation 48 in the groove 14" and that "once the indentations 48, 50 are made, the clip 40 will not slide out of the groove 14, and it will stay in place on the heat sink 10...." Col. 4, lns. 12-22. That is, once the clip 40 is positioned within groove 14 of Earl et al., the clip is not removable therefrom. Earl et al. further states that "the clip 40 is thereby held in place in the groove 40, as the top 42 of the clip 40 cannot slip past the indentations 48, 50 in the groove." Col. 4, lns. 60-64.

It is noted that Earl et al. does disclose a disassembly technique utilizing a pair of removal pliers with reference to Figs. 6 and 7. However, even after disassembly, "the clips 40 are still held in place by the indentations 48, 50, [so that] they do not become loose and fall onto the printed circuit board." Col. 6, lns. 6-12. As such, the grooves of Earl et al. are not constructed to removably engage the clips disposed therein. As such, Applicant believes claim 1 is patentably distinct over Earl et al. as that which is called for therein is not taught, shown, or suggested in Earl et al.

The Examiner also rejected claim 4 under 35 U.S.C. §102(b) as being anticipated by Earl et al. Applicant has amended claim 4. As amended, claim 4 calls for, in part, a groove formed in a first and a last fin of a heat sink wherein the groove is constructed to engage a retainer therein upon translation of the heat sink relative to the retainer in a direction generally

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transverse to a length of the groove. Earl et al., referring to Figs. 3b and 3c, states that "while the top 42 can slide in the groove 14 along the length of the groove, the curvature of the back 44 and the positioning of the ledge 46 are such that the top 42 cannot fall out of the groove 14 away from its ends." Col. 4, lns. 3-7. That is, the clip 40 of Earl et al. must be translated in a direction generally aligned with the length of the groove formed in the heat sink thereof. Earl et al. discloses a clip 40 that is not engageable or removable from groove 14 upon translation of the heat sink relative to the clip in a direction generally transverse to a length of the groove as presently called for in claim 4. As such, Applicant believes claim 4 is patentably distinct thereover.

The Examiner next rejected claim 12 under 35 U.S.C. §102(b) as being anticipated by Earl et al. Applicant has amended claim 12 to call for, in part, a pair of external surfaces extending a length above the base from the first and second ends of the base and the plurality of fins extending from the base between the pair of external surfaces and extending a length different than the length of the external surfaces. As shown in Fig. 8 of the present Application, fins 56(a) extend a distance from base 54(a) different than a distance external surface 52(a) extends from base 54(a). As shown in Fig. 2 of Earl et al., the external surfaces of the heat sink shown therein and the plurality of fins extending between the end surfaces of the heat sink have a uniform length of extension from base 13 of the heat sink 10. As such, that which is called for in claim 12 is patentably distinct over Earl et al.

The Examiner also rejected claim 19 under 35 U.S.C. §102(b) as being anticipated by Earl et al. Claim 19 has been amended. As amended, claim 19 calls for, in part, a heat sink having a base with a pair of generally parallel sides and a first end fin and a second end fin and a plurality of intermediate fins extending from the base between the first and second end fins. Claim 19 further calls for, in part, a retainer constructed to receive the heat sink therein and removably engage the first and second end fins of the heat sink. As previously discussed with respect to claim 1, clip 40 of Earl et al., as shown in Fig. 1 thereof, is not constructed to removably engage lips 20 of heat sink 10, as shown in Fig. 2. That is, once clip 40 is positioned within the groove, clip 40 is not removable therefrom. Earl et al. states that "once the clips 40 are so attached to the heat sink 10, the heat sink 10 and the clips 40 are in effect a single unit which can easily be handled by the assembler." Col. 4, lns. 65-67. Claim 19 further calls for the retainer to engage the first and second end fins of the heat sink. As shown in Fig. 3 of the present application, spring member 26 includes an inwardly-directed projection 30 which engages groove 58 formed in the end fin of the heat sink. As shown in Figs. 1 and 2 of Earl et al., clip 40 is

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constructed to permanently engage lip 20 extending from base 13 of heat sink 10. That is, clip 40 does not engage the end fin of the heat sink but rather engages the end of the base of the heat sink assembly with a fin extending thereabove from the first to the second to the end fins of the heat sink.

It is noted that Earl et al. does disclose a disassembly technique utilizing a pair of removal pliers with reference to Figs. 6 and 7. However, even after disassembly, "the clips 40 are still held in place by the indentations 48, 50, [so that] they do not become loose and fall onto the printed circuit board." Col. 6, lns. 6-12. As such, at least for the reasons provided hereabove, that which is called for in claim 19 is not taught, shown, or suggested in Earl et al. Claims 23 and 24 have been amended to comport with the amendment of claim 19.

The Examiner next rejected claims 2, 10, 16, and 20 under 35 U.S.C. §103(a) as being unpatentable over Earl et al. stating that "Earl discloses the claimed invention except aluminum as the material." The Examiner further states that "it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the heat sink of aluminum, since it has been held to be within the general skill of the worker in the art to select the known material on the basis of its suitability for the intended use a matter of design choice." Although Applicant believes each of these claims is patentably distinct over the art of record at least pursuant to the chain of dependency as depending from a claim otherwise believed to be allowable, Applicant respectfully disagrees with the Examiner's conclusion that that which is called for in each claim is obvious in light of the art of record. MPEP §2142 states that "to establish a *prima facie* case of obviousness...the prior art record (or references when combined) must teach or suggest all the claim limitations." Earl et al. makes no disclosure that the heat sink shown therein is either (a) formed from an aluminum material or (b) formed from extruded aluminum as called for in the rejected claims. Although Applicant does not necessarily disagree that aluminum is a common material used in heat sink-type applications, Applicant respectfully disagrees that extruded aluminum heat sink assemblies as called for in the claims are well known. The art of record does not disclose, teach, or suggest an extruded aluminum heat sink as called for in the present claims. As such, that which is called for in claims 2, 10, 16, and 22 is believed to patentably define over the art of record.

The Examiner next rejected claims 1-24 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4, and 14-17 of U.S. Patent No. 6,633,485 stating that "although the conflicting claims are not identical, they are not patentably distinct from each other because claims include the heat sink having grooves on the

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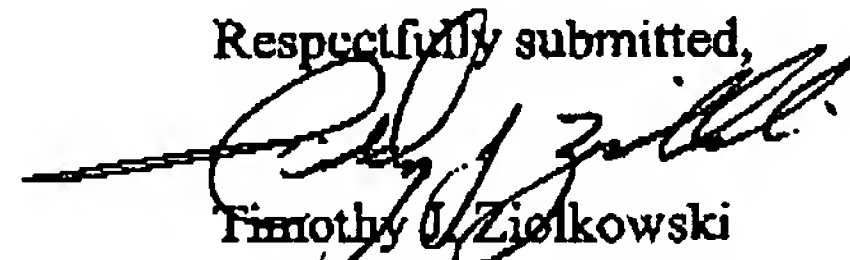
outside surface to accommodate retainers for attaching the heat sink to a heat generating component as well as other elements." Applicant respectfully disagrees.

MPEP §804.01, entitled "Prohibition of Double Patenting Rejections Under 35 U.S.C. §121," states that "the third sentence of 35 U.S.C. §121 prohibits the use of a patent issuing on an application with respect to which a requirement for restriction has been made, or on an application filed as a result of such a requirement, as a reference against any divisional application..." As stated in the first paragraph of the present specification, "the present application is a divisional and claims priority of U.S. Serial No. 10/065,794..." – now issued U.S. Patent 6,633,485. Claims 1-3 of the present application are the claims of a non-elected invention originally presented in USP 6,633,485, the parent of the above captioned application. As such, a double patenting rejection thereto is statutorily impermissible. Furthermore, claims 4-24 are clearly similar in scope to that which is called for in claims 1-3. As such, a double patenting rejection of any of the present claims is improper and statutorily impermissible. In other words, the Examiner cannot restrict claims in one application claiming that they are distinct and/or independent, then later in a divisional, claim they are not "patentably distinct." As such, Applicant respectfully requests withdrawal of the double patenting rejection.

Accordingly, at least for the reasons set forth above, Applicant believes that which is called for in claims 1-24 is patentably distinct over the art of record. Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1-24.

Applicant appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,



Timothy U. Ziolkowski
Registration No. 38,368
Direct Dial 262-376-5139
tjz@zpspatents.com

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P.O. ADDRESS:
Ziolkowski Patent Solutions Group, LLC
14135 North Cedarburg Road
Mequon, WI 53097-1416/262-376-5170